REMARKS

The above-identified patent application has been amended and reconsideration and re-examination are hereby requested.

The Examiner objected to the drawings because some of the text in the figures was illegible. The Examiner required corrected drawings in response to the office action to avoid abandonment of the application.

Applicant has enclosed herewith a proposed set of drawing changes showing changes marked in red. Applicant has also enclosed herewith a set of formal drawings that bring to affect the changes denoted in the marked-up drawings. Applicant requests approval of these drawing changes and submission of these drawings for continuing examination of this application.

With respect to Figure 9, items 134 and 136 fit into the process illustrated in Figure 9 according to a parallel process that is executed in the server. It is submitted that these drawings are proper.

The Examiner also objected to the drawings as failing to disclose several reference signs not mentioned in the description. Applicant has amended the description to include these references or has deleted the references as appropriate as shown on the proposed drawing corrections.

The Examiner also objected to the drawings since they did not include several reference signs mentioned in the description. Again, Applicant has included those references in the description as appropriate and as noted in the attached proposed drawing corrections.

Finally, the Examiner objected to the drawings because the reference character 104 was used to designate both the faring process in Figure 5 and check availability in Figure 6. Applicant has amended this as shown on the proposed drawing correction furnished herein.

The Examiner objected to the specification because of informalities and the Examiner indicated the application number should be included on page 8, line 21. Applicant has included this material and believes the application is now proper.

The Examiner objected to claim 5 because the word "costs" in the last line of the claim did not limit the types of margin and fixed costs associated with obtaining information.

Applicant has amended claim 5 to recite monetary-costs. This now limits the costs associated with obtaining information.

The Examiner rejected claims 1-14 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner indicated it was unclear whether the Applicants intend to claim a system or method because of Applicant's use of the word "process."

Applicant's claims 1-14 recite a travel planning system. In particular, Applicant's claim 1 recites a scheduling process, a faring process, and an availability process. Applicant contends that the recitation of these functions as processes does not render the claims as reciting a method, but rather reads on a system including computer processes that when executed perform the recited functions. Hence, claim 1 recites a system not a method. Accordingly, claims 1-14 particularly point out and distinctly claim Applicant's invention.

Applicant has amended claim 9 to delete the phrase "such as" and replace with "including."

Applicant has amended claim 1 to clarify what is meant by a single source of seat availability for a mode of transportation. Applicant has, therefore, made corresponding amendments to claims 3, 4, 5 and 9 as appropriate.

Applicant has amended claim 14 to recite that the data are sent to the intelligent client.

The Examiner rejected claims 1-4, 9 and 11-13 under 35 U.S.C. 102(e) as being anticipated by Lynch, U.S. Patent 6,119,094.

Applicants' claims 1-4, 9 and 11-13, as amended, are distinct from Lynch '094. The Examiner indicates that Lynch discloses at column 2, lines 60-65: col. 6, lines 11-17, an availability component to search at least one source of seat availability data for the travel options and to determine if the data from the availability sources is reliable. The Examiner considers that Lynch verifies the reliability of the availability data by having the system determine whether or not a predetermined time period has elapsed since the information was last obtained and cites (col. 6, lines 11-17).

Applicants have made clarifying amendments claim 1 that still distinguish from Lynch. As amended, Applicants' claim 1 recites ... an availability process that uses results from a source of seat availability information for a mode of transportation to determine a set of available

instances of transportation and determines quality properties of the availability information to guide the travel planning system to determine a subsequent set of available instances of transportation. This feature is neither described nor suggested by Lynch.

In particular, at column 4, lines 6-23, Lynch describes what he means by inventory data structure 18 and inventory information.

> For airline flights, the inventory information may specify all flights between each particular city of departure and city of destination (otherwise known as a "city pair"), the arrival and departure times of the flights, the airline carriers providing such flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate legs or "segments," the identification of each segment of a flight as either domestic or international, the fare classes available on the flights, and pricing information (e.g., one-way ticketing, round-trip ticketing, city-to-city ticketing, or end-to-end ticketing) that can be used to determine the rates of various flights.

Specifically, the inventory management information is information pertaining to flights and fares. However, the information described by Lynch does not relate to the availability of seating for the particular instance of transportation. This follows since at this point Lynch's system does not have a particular pricing solution (itinerary and valid fare) to which it can inquire about availability and hence book a ticket. At that point there is insufficient information to make a query to an availability system to see if a ticket for an itinerary and fare combination would be sold.

Moreover, Lynch's local database as described in FIG. 3 and use of a predetermined time lapse is not for the purpose of training or updating the database to determine availability information, but rather is used to determine the inventory information pertaining to particulars of airline flights, and fares, not whether seating based on a specified flight and fare, in fact, would be made available if the user made an availability inquiry to a computer reservation system.

Lynch later on describes the use of plural computer reservation systems at column 4, lines 52-62. Lynch's use of the word "available" does not correspond to producing sets of

predicted instances of transportation from an availability predictor source as recited in claim 1. Accordingly, claim 1 is distinct from Lynch.

Lynch fails to suggest an explicit determination of the quality of the availability data. Lynch does not compute, store, or express any measure of the quality of the data, and therefore certainly does not use the quality of the data to guide further availability processing.

Applicants' claims 2-4 add additionally distinct features. For example, claim 2 recites that the availability process determines whether the single source of availability information is reliable, and if the results are not reliable, the availability process makes a second set of seat availability queries to the same source or a different source of seat availability information.

Claim 2 is distinguished from Lynch, since Lynch does not test reliability of an availability process and does not suggest making a second set of seat availability queries to the same source or a different source of seat availability information.

Claim 3, which recites that the availability process makes multiple sequential seat availability predictions to multiple predictors of seat availability information further distinguishes from Lynch. The Examiner takes the position that claim 3 is described by Lynch at column 6, lines 25-37. However, that passage of Lynch is directed towards reading data from a plurality of computer reservation systems. Those computer reservation systems do not correspond to multiple predictors of seat availability, as recited in claim 3. Lynch does not take into consideration the varying quality and cost of multiple sources of availability. As discussed earlier, Lynch does not perform queries to different sources of availability on the basis of earlier results. Lynch simply describes a fixed schedule for robotically querying for data without regard to any response. Accordingly, claims 3 and 4 are further distinct from Lynch.

Applicants' claim 9 is further distinct over Lynch. Claim 9 has been amended to depend from claim 3 and now recites that the sources of seat availability information are sources of predicted availability information that generate replies with different quality properties. This feature is further distinguished from Lynch since Lynch does not describe a source of predicted seat availability information, nor does Lynch describe plural sources of predicted availability information. Lynch, moreover, does not describe that the predicted availability sources generate replies with different quality properties including freshness, confidence, precision and validity as recited in claim 9.

Applicants submit that claims 11-13 distinguish from Lynch because Lynch does not describe an availability process that speculatively determines travel options using low quality, uncertain or missing availability data as recited in claim 11, for example. As mentioned above, Lynch's inventory information does not suggest availability information.

The Examiner rejected claims 5-8 and 10 under 35 U.S.C. 103(a) as being unpatentable over Lynch et al., U.S. Patent 6,119,094 in view of Lynch et al., U.S. Patent 5,839,114.

These claims are distinguished from Lynch '094 and '114 since neither Lynch 094 nor Lynch '114 suggest the basic features of Applicants' claim 1. Moreover, Lynch '114 neither describes nor suggests that different sources of predicted seat availability information have differing fixed and modular costs associated with obtaining information, as recited in claim 5.

Similarly, claims 6-8 are distinct over Lynch '094 and Lynch '114 for the reasons stated above.

The Examiner rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Slotznick, U.S. Patent 5,983,200.

Applicants contend that claim 14 is distinct from Lynch taken separately or in combination with Slotznick for the reasons mentioned in conjunction with claim 1. Moreover, Slotznick does not describe an intelligent client for processing and integrating scheduling and fare information and availability data in a travel planning system.

Applicants have considered the art made of record but not applied by the Examiner and submit that this art, whether taken separately or in combination with the applied art, neither describes nor suggests Applicants invention as now claimed.

Applicants have added new claims 15-26 directed to features of a computer program product for use in a travel planning system and a method for determining availability. Applicants submit that these claims are distinct since the reference neither describe nor suggest a computer program product comprising instructions to determine quality of availability information to guide a travel planning system to determine a subsequent set of available instances of transportation, as in claim 15.

Claim 21 distinguishes since the art does not suggest evaluating quality of availability information received from a source of availability information for a set of instances of

transportation to determine a set of available instances of transportation, to guide a travel planning system in determining a subsequent set of available instances of transportation.

Accordingly, in view of the above amendments and remarks, it is submitted that the claims are now patentable over the art of record and allowance of the application is requested.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Enclosed is a $180.00 check for excess claim fees and a $920.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 7/31/02

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Version with markings to show changes made

In the specification:

Paragraph beginning at page page number , line line number has been amended as follows:

Insert paragraph with brackets and underlining here

Paragraph beginning at page 8, line 11 has been amended as follows:

-- The availabilty process 70 runs on the server 12 and access an availability system 66 of one or more airlines (generally each airline will have its own availability system) by sending availability queries over the network 22 (FIG. 1). The system 10 also includes other availability sources 65 such as an availabiliy predictor based upon a cache or database of stored availability queries 65a, a predictive model of availability 65b and/or a simulation of an availability process 65c or an actual availability process 65d running as a local process to the server process 12. Such systems are described in U.S. Patent Application entitled "Method and Apparatus for Providing Availability of Airline Seats," Serial No. [XXXXX] 09/431,366 Filed 11/1/1999 [XXXXX] by Carl G. Demarcken et al assigned to the assignee of the present invention and incorporated herein by reference.

Paragraph beginning at page 10, line 13 has been amended as follows:

-- As shown in FIG. 3A, after the cache queries are completed, the process 76 sorts 76a the list of legs based on the freshness of the information returned by the cache, most stale first. The process 76[0a] queries 76b the live data source on each of those legs in order (most stale first). Within a predetermined timeout period, the system stops the query process before all queries have been made to the live source. Because the list of legs was prioritized to put the lowest quality data first, the process 76 received fresh data about those legs first, and the minimum quality of information the system has about any leg was raised. --

Paragraph beginning at page 16, line 12 has been amended as follows:

-- Referring to FIG. 5, a process 70c for determining availability after scheduling and using multiple faring process is shown. When there is a plurality of availability sources with different costs and different qualities of results, extra sets of availability checking and faring may be inserted into the process. This is especially useful when the high quality availability source is extremely expensive to query and it is very important to reduce those query costs. This ordering process makes even more careful use of the high-cost resources. In this process the order process determines a schedule 100 of possible legs of flights(assume all available) and checks 102 availability using a lower quality availability source. The process 70c then performs a first faring pass 104. Once that is completed the process 70c iteratively checks availability 106 guided by faring and prior availability results. The process 70c perform the subsequent availabilty checks 108 using higher quality availability sources. After the final check it can have a final faring process guided by all of the results 109. --

Paragraph beginning at page 17, line 3 has been amended as follows:

-- The ordering process ordering of operations for an "After Faring" strategy is shown. The process determines 100 legs [of] using a scheduler and determines fares 102 using a faring process. The process 70d makes use of the low-quality low-cost source of availability information 103, assume every seat is available in every booking class. Computation proceeds as if the low-quality speculatively guessed data were high quality, in the sense that the origin of the data does not affect the computational processes. This process uses speculative computation 105 to determine results. Instead of spending the cost to acquire and process actual answers, the system speculates 105 as to what the answers might be and expends computation to ascertain what the results would be were the speculation true. Speculative computation has already been seen in the context of Monte-Carlo integration to compute the expected price discussed above. --

In the claims:

Claims1-5, 9 and 14, have been amended as follows:

(Amended) 1. A travel planning system comprises:

a scheduling process for determining a set of instances of [transportion] transportation that satisfy a user query;

a faring process that determines fares valid for at least some of the instances in the set of instances of [transportion] transportation; and

an availability process that uses results from a [single] source of seat availability information for a mode of transportation to determine a set of available instances of [transportion] transportation and determines [whether] quality properties of the availability information to guide the travel planning system to determine a subsequent set of available instances of transportation [results from the single source are reliable].

(Amended) 2. The travel planning system of claim 1 wherein [if] the availability process determines whether the single source of availability information is reliable, and [that] if the results are not reliable, the [availablity] availability process makes a second set of seat availability queries to the same source or a different source of seat availability information.

(Amended) 3. The travel planning system of claim 1 wherein the [availablity] availability process makes multiple, sequential seat availability queries to at least one [multiple] source[s] of seat availability information.

(Amended) 4. The travel planning system of claim [1] 2 wherein the [availablity] availability process makes multiple simultaneous seat availability queries to multiple sources of seat availability information.

(Amended) 5. The travel planning system of claim [1] 3 wherein the sources of seat availability information have differing fixed and marginal costs associated with obtaining information, including computation, communication, time, and monetary-cost.

(Amended) 9. The travel planning system of claim [1] 3 wherein the sources of seat availability information are sources of predicted availability information that generate replies with differing quality properties [such as] including at least one of freshness, confidence, precision, and validity.

(Amended) 14. The travel planning system of claim 1 wherein the travel planning process data containing scheduling and fare information and availability data are sent to an intelligent client for further processing and integration by the client.